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To cite this article: Carlos Marmolejo-Duarte *et al* 2019 *IOP Conf. Ser.: Mater. Sci. Eng.* **603** 032053

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How Relevant is Energy Efficiency in The Marketing of Homes? Evidence from Real Estate Agents in Spain

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Abstract. In order to foster informed transactions, the Energy Performance of Buildings Directive has made it mandatory to get an Energy Performance Certificate in the marketing of the Communitarian Real Estate. Due to energy savings and environmental preservation, it is expected that efficient buildings do receive an increased willingness to pay. The evidence coming from a number of statistical studies has confirmed the existence of such premium. Nevertheless, such finding is contradictory in relation to the conclusions of opinion-based studies. This paper seeks to study whether energy efficiency drives market price and the marketing of homes in Spain. In doing so, a survey applied to realtors across the country has been implemented. The results are in line with other opinion-based studies pointing out that energy performance has a negligible impact on the marketing of homes. Furthermore, real estate agents suggest that companion policies in the sphere of subsidies and fiscal exceptions are needed in order to bring energy efficiency to the first line of elicitation attributes in the residential market.

1.Introduction

In Europe, buildings are responsible for 40% of the total energy consumption as well as 36% of CO₂ emissions. Taking into consideration that most of the energy is produced from fossil importations, the European Commission (EC) has seen it necessary to reduce energy consumption for geopolitical reasons, but also because a greener economy can create employment and wealth, at the time that the environment is protected [1]. For such reasons, in 2002 the EC issued the Energy Performance of Buildings Directive (EPBD), furtherly recast in 2010 and 2018. Such policy seeks to foster the production of efficient buildings by bringing energy transparency to real estate markets. In doing so, it is mandatory to get an Energy Performance Certificate (EPC) in the marketing of buildings to be leased (to a new tenant) or sold. The main rationale is that potential users may prefer efficient buildings when informed on the potential energy savings and environmental protection. Such preference may be capitalized into a larger willingness to pay (WTP) for efficient buildings. Eventually, such WTP can be transformed into market premiums [2]. The evidence coming from the application of the hedonic approach has strongly suggested the existence of such green premiums.



Although the impact on prices (*i.e.* price increments for efficient buildings) is largely divergent across Europe, being, in general, smaller in Southern countries as revised in the next section of this paper. Interestingly, the evidence coming from qualified opinion research shows a distinct history in which energy efficiency exerts a negligible influence over prices, this finding is especially true in the real estate market where other architectural and locative attributes do play a paramount role in home elicitation and price formation.

In Spain, the evidence on EPC rankings impact over residential price is scarce, although the existing studies do suggest a modest impact on prices. Furthermore, there is evidence on the reversed impact of energy efficiency on prices due to anomalies on EPC advertising, and even research suggesting that in some residential markets the impact is null and in others energy efficiency does play an incorrect role as a general quality indicator. All in all, the conclusions extracted from statistical-based studies are inconclusive, at the time that evidence coming from opinion-based studies is extremely scarce and require to be expanded.

The aim of this paper is to explore whether energy efficiency does play a significant role in the marketing of homes, both in terms of elicitation and price formation. In doing so, a survey coming from qualified real estate agents is analysed. Results are broadly in line with other opinion-based studies and stress that for both owners and house user's energy efficiency plays a small role in housing marketing. Nevertheless, it seems to be slightly more important in the selling market in relation to the leasing market. This latter finding is compatible with evidence coming from the hedonic analyses that have found a larger semi-elasticity for EPC rankings in the selling market. Interestingly, realtors do not correctly signal the role of EPC labels, since they primarily assume that EPC rankings are comfort or general quality indicators. In general, real estate agents think that policies with economic implications (e.g. fiscal or subsidies) do have a larger potential to positively influence the diffusion of efficient homes.

The remainder of the paper is organised as follows: first, a brief literature review is offered; second, the methodology, study area and data are presented; next, the results are discussed; in the concluding section the implications of our findings for public policy are presented.

2. The inconclusive evidence of EPC rankings impact on real estate prices

Since the pioneering work in the Netherlands of Brounen and Kok [3], that found a positive correlation between selling prices and EPC rankings, there is an increasing number of studies arriving to similar, though with some peculiarities, conclusions. The common denominator of such studies is the analysis of housing prices using the hedonic approach. Such method departs from the hypothesis that households equal the price they pay for homes to the total utility they can extract from this asset [4]. So, using a multiple regression technique it is possible to identify partial utilities, that is to say, the marginal price for each of the multiple attributes that make up residential assets. For the sake of comparability, most of the studies use a semi-log function in the specification of the regression model. So, the coefficients are expressed in terms of semi-elasticities, that is to say, the percentual variation of prices for each unit the attributes vary. Table 1 contains a selection of studies and the price semi-elasticity for energy rankings as measured in the EPC Scheme.

While, with the exception of the reversed sign of the EPC ranking in Oxford [2] and Alicante [5] produced, in the first case for limitations on the specifications of the hedonic models, and anomalies in the marketing of EPC labels in the second, all of the studies contained in table 1 have found a positive correlation between energy efficiency and residential prices. So, efficient homes receive market premiums while inefficient dwellings receive market penalties, also known, in the literature, as brown discounts. Exceptions to that rule can be found in the work of Marmolejo & Ai [6] and that of Turin [7]. In the first case, the authors argue that EPC rankings have a null impact on the segment of recently

completed apartments boasting state-of-the-art amenities. On the contrary, in the case of post-war apartments exhibiting the poorest of the amenities, EPC rankings play an incorrect quality role in price differentiation. In the second study, the authors have found that EPC rankings exert a null impact on price formation when other quality and age indicators are taken into consideration in the regression models.

Table 1. Selected studies reporting the hedonic EPC agenda thorough Europe.

Case Study	EPC Ranking Scale	Marginal impact of EPCs on		From Energy Ranking X to Y (Y/X)	Type of Prices	Author
		Sale	Rent			
Netherlands	Cont.	3.60%		step	TP	[3]
		10.10%		A/D		
		5.50%		B/D		
	Cate.	2.10%		C/D		
		-0.50%		E/D		
		-2.30%		F/D		
		-4.80%		G/D		
Vienna		10% - 11%	5% - 6%	step		
Lower Austria		5% - 6%	4.40%	step		
Brussels (Flandes)		4.30%	3.20%	step		
Brussels (Capital)		2.90%	2.60%	step		
Brussels (Wallonia)		5.40%	1.50%	step		
Lille	Cont.	3.20%	*	step	LP	[2]
Marseille		4.30%	*	step		
Ireland (cities)		1.70%	1.40%	step		
Ireland (not cities)		3.80%	1.40%	step		
Oxford		-0.40%	-4.00%	step		
England and Wales	Cate.	5.00%		A,B/D	TP	[8]
		1.80%		C/D		
		-0.70%		E/D		
		-0.90%		F/D		
		-6.80%		G/D		
Ireland	Cont.	1.30%	0.50%	step	LP	[9]
		9.30%	1.80%	A/D		
	Cate.	5.20%	3.90%	B/D		
		1.70%	*	C/D		
		*	-1.90%	E/D		
		-10.60%	-3.20%	F,G/D		
Turin	Cont.	26.44 Euro/m ²		step	LP	[10]
	Cate.	*		A,B,C,D,E,F,G	TP	[7]
Metropolitan Barcelona	Cont.	0.85%		step	LP	[11]
		9.62%		A/G		
	Cate.	*		C/G		
		4.00%		D/G		
		2.00%		E/G		
		*		F/G		
Barcelona, Valence, Alicante	Cont.	1.40%		step	LP	[5]
Madrid, Bilbao, Sevilla, Vitoria and Málaga	Cate.	9.80%		A,B,C/D,E,F,G	OV	[12]
		5.40%		A,B,C,D/E,F,G		

Notes: * No significant impact found; EPC ranking scales: Continuous (Cont.) and Categorical (Cate.); Type of Prices: Transaction Price (TP), Listing Price (LP) and Opinion Value (OV).

Interestingly enough, the impact seems to be larger in the selling market in relation to the leasing market. Such pattern may respond to differences in consumers' capitalization of future benefits (*i.e.* savings in energy bills). In any case, there is a clear divergent impact of EPC on residential prices in the different countries analysed. Differences in climate and energy costs in relation to home prices and, perhaps, environmental concerns may be behind such divergences. Furthermore, García-Hooghuis and Neila [13] have pointed out that divergences in the technical transposition of the EPBD across the Member States prevent to make direct cross border comparisons.

Nonetheless, the positive impact on prices reviewed before contrasts with the outcomes of opinion-based research. Murphy [14] conducted a survey in the Netherlands in order to identify the impact of EPC information on price negotiation in the context of home purchasing. Her results suggest that “a higher EPC fails to have a direct influence during negotiation and decision making” (p. 666). In the same line, Parkinson *et al.* [15] have found no correlation between EPC ratings and rental values while surveying commercial office tenants in the UK. Their findings suggest that facilities’ aesthetics are the main driver of rents. Compatible evidence can be found in the study of Pascuas *et al.* [16] based on surveys applied to real estate agents in eight countries. According to their results, EPC ratings exert a negligible impact on housing prices, this conclusion is especially valid in the case of Spain where only 15% of the surveyed agents confirmed the existence of a premium for efficient flats. Departing from such contradictory evidence, that is: on the one hand a positive market premium for efficient properties suggested by hedonic models; and on the other hand, no strong evidence on EPC impact on prices and rents coming from demand and agents’ surveys, Olaussen *et al.* [1] have carried out an interesting quasi-natural experiment in order to identify whether omitted variables in model specifications can lead to spurious results. Their study, based on Oslo’s residential market, consists of analysing the price of homes sold before and after July 2010 when it became mandatory to include the EPC labels in advertisements, so as to identify whether such labels did actually produce a price increase in the case of efficient homes. In doing so, they assigned the EPC rank to each home in the pre-2010 sample according to the class the same home had in the post-2010 sample. Their hedonic results show similar market premiums and penalties on EPC ratings for the pre and post 2010 samples, allowing them to conclude that “price premium of the energy labels clearly captures something else rather than an effect caused by the labels themselves” (p. 251). Nonetheless, such authors warn that even though EPC rating does not matter in Norway, they could matter in other countries, possibly where trust and honesty in the building industry are lacking.

This paper is aimed at expanding the evidence of opinion-based research coming from qualified informants as it is next explained. Since such evidence in Spain, and more generally in Southern countries, is scarce and may lead to confirm or refute the incorrect role that, according to Marmolejo and Chen [6], EPC ratings play in producing price discrimination throughout a misunderstood perception as a general quality indicator.

3. Methodology, case study and data

In order to explore whether EPC rankings do impact on the residential marketing in Spain a comprehensive, but short, survey has been applied to qualified realtors.

The method has consisted of the following steps: design of the survey, pilot-test and redesign, distribution of the survey, data gathering, depuration and analysis.

3.1. Survey design and testing

While the main aim of the research is centered in exploring the influence of energy efficiency in the marketing process, the survey goes beyond in order to extract the opinion of real estate agents on a number of policies that could foster efficient buildings. Also, it allows learning on the knowledge the realtors have on the EPC scheme. So, the survey is structured in the following parts:

3.1.1. Perceived role of EPC rankings and knowledge regarding the EPC scheme. In this section, it is analysed, on the one hand, the role that the realtors assume that EPC ranks play and their knowledge on the EPC scheme. This section allows learning whether EPC label is understood as an indicator of energy consumption and CO₂ emissions (what actually it is), or also as an indicator of the generalised quality of homes and their thermic comfort. Also, realtors are required to indicate if they believe EPC labels come from actual measurements or model estimations, as well as the architectonic attributes they believe do impact on EPC rankings.

3.1.2. Influence of EPC rankings on real estate marketing. In this section, realtors are required to express, according to their professional expertise, the impact that EPC rankings have in speed to market, price determination and price negotiation; as well as the importance that both consumers (*i.e.* buyers and tenants) pay to EPC rankings when acquiring or selling a home. Also, it is inquired the moment in which consumers are informed on the EPC ranking, according to the RD 235/2013 that transposed the EPBD in Spain, consumers must be informed from the advertising of the property. Nevertheless, according to Marmolejo [11] and Marmolejo and Chen [5], this obligation seems to be far from be met.

3.1.3. Perceived impact of companion policies aimed to foster efficient homes. This section is intended to learn the expected impact coming from the eventual implementation of a number of public policies aimed to promote efficient homes. Such policies range, from information campaigns, addressed to the general population in order to disseminate the aim of the EPC scheme and the economic and environmental implications of energy efficiency, to active policies with economic implications coming from private markets (e.g. green mortgages) and public bodies (e.g. subsidies and fiscal exceptions).

3.1.4. Concluding section. The last section includes an open format text aimed to allow realtors to express their particular ideas in order to improve the efficacy of the EPC scheme, as well, it inquires on the provinces where the realtors assess home transactions.

The survey was discussed in a focus group approach formed by experts in real estate marketing, architecture, energy efficiency, and policy-making, and furtherly tested in a restricted sample of surveyors who expressed the inconsistencies and difficulties in catching the meaning of the information.

3.2. Survey distribution, data collection, depuration and spatial coverage

The final survey was implemented using an online system. This format allows respondents to freely express their opinion without moral or political constrictions. For the same reason, the survey is anonymous and no information regarding the IP has been retrieved. So as to disseminate the survey among experienced realtors we have only used the channel of Professional Associations. Most of them require they associates to show expertise on the field of real estate assessment, and according to regional legislation (e.g. in the Autonomous Region of Catalonia), do require to show academic proficiency. So, the sample analysed here is made up the opinion of qualified realtors. Since contact data is protected by national laws, the link to the survey was directly distributed by the Professional Associations. Replies were gathered between June 2017 and October 2018, the response statistics are as follows: from all the sent e-mails 92% were correctly received, 23% did open the mail and 13% successfully completed all the questions contained in the survey. In this paper the depurated sample is made up 400 surveys, the depuration process has consisted of eliminating those surveys with 5 or more no answered items, in total there are 37 items organised in 11 broad questions. This sample is larger than the 352 surveys required to reach an error of 5% at 95% confidence and much larger than the 68 surveys analysed in the ZEBRA 2020 Project aimed at assessing the relevance of EPC labels on property prices and consumer preferences [17].

While all the 17 Autonomous Regions are included in the sample there is not enough information to provide a statistically significant stratified analysis at Province nor regional level. For that reason, the information is analysed as a whole. Finally, the information has been analysed using conventional statistical techniques as it is conveniently explained in the next section.

4. Results and discussion

EPC rankings inform on the energy consumption and CO₂ emissions for the same comfort level. Nonetheless, according to table 2 the perception that realtors have on these labels is quite different. They basically agree with EPC rankings as a synthetic indicator of thermal comfort. In second term,

they agree with the role of EPC rankings as a synthetic indicator of housing quality. While there may be a correlation between energy performance with other dimensions of quality, EPC rankings are not primarily a quality indicator. Conversely, real estate agents support in a lesser extent the actual role of EPC. It is possible that such misunderstanding comes from the practical absence of public campaigns addressed both to professionals and general population explaining the meaning of EPC labels. Nonetheless, in general realtors have an acceptable knowledge on the architectonic attributes that are taken into consideration in the determination of EPC rankings, also most of them (89%) do correctly recognise that EPC labels are produced by an estimation and not actual measurements. From all the attributes included in the survey they only have incorrectly pointed out 10% as determinants of energy performance. Although, in some dimensions there is a sharp lack of knowledge: a large proportion think that lighting (42%) and water economising devices (37%) are determinants of EPC rankings. This aspect reveals that responses come from an intuitive knowledge since according to the Spanish legislation lighting is not a determinant of EPC labels in the residential sector.

Table 2. Perceived role of EPC rankings and knowledge on their determination procedure.

Agreement level regarding the following affirmations*			
	N	Average	St. Dev
EPC ranking allows estimating the savings in the electricity and/or gas bill	398	2.12	0.92
Allows to know the environmental impact of energy consumption	398	2.27	0.94
It is a synthetic indicator of residential quality	396	2.36	0.95
It is a synthetic indicator of thermal comfort	396	2.43	0.94
Realtors' knowledge on the EPC ranking determination procedure			
	N	Incorrect answer (n)	Incorrect answer (%)
Realtors that think lighting is included in EPC estimation	400	167	42%
Realtors that think water economising devices are included in EPC estimation	400	149	37%
Realtors that think energy consumed in construction is included in EPC estimation	400	60	15%
General number of attributes inquired	3,600	376	10%
Realtors that think EPC comes from actual measurements	400	45	11%

Note: * Values reported are averages from original categorisation of responses: 1= null, 2=Low, 3=medium, 4=high

The aim objective of the study is to learn, from the real estate experts, the impact that EPC ranking produce in the housing marketing. Figure 1(a) details the opinion of the surveyed agents, in general they do not think that efficient homes improve its marketing process: only 3% strongly agree that this fact speed up the selling/leasing process, while only 1% strongly agree that it is a determinant of prices and reduce the price negotiation (*i.e.* the ration between closing price/asking price). Conversely most of the realtors (62-67%) say that EPC labels produce a null impact on the housing marketing. This finding enormously contrasts with evidence coming from hedonic analysis as discussed in the concluding section.

As discussed in section 2, EPC ranking impact is larger on sale prices in relation to leasing prices. In order to verify whether realtors have the same opinion they were directly asked. Figure 1(b) details that in general (48-62%) agents think that indistinctively owners and consumers of both tenure regimes do give a null importance to EPC rankings. Nonetheless, it seems that households wanting to buy pay a little more attention to the energy performance (Chi sq. sig.=0,000). The same seems to be true for the owners wanting to sell their house, in general realtors think that they pay more attention in relation to those wanting to lease their house (Chi sq. sig.=0,000). This finding confirms that also from the qualitative knowledge of realtors that residential energy performance is more relevant in the selling market. It is possible, that households only consider energy efficiency in case of buying the home due to long-term future energy savings may compensate a larger investment, while leasing is seen as a transitory tenure in a country where, according to the National Statistics Institute, 71% of households own their home. This fact has large implications for public policies aimed to foster the leasing market as discussed after.

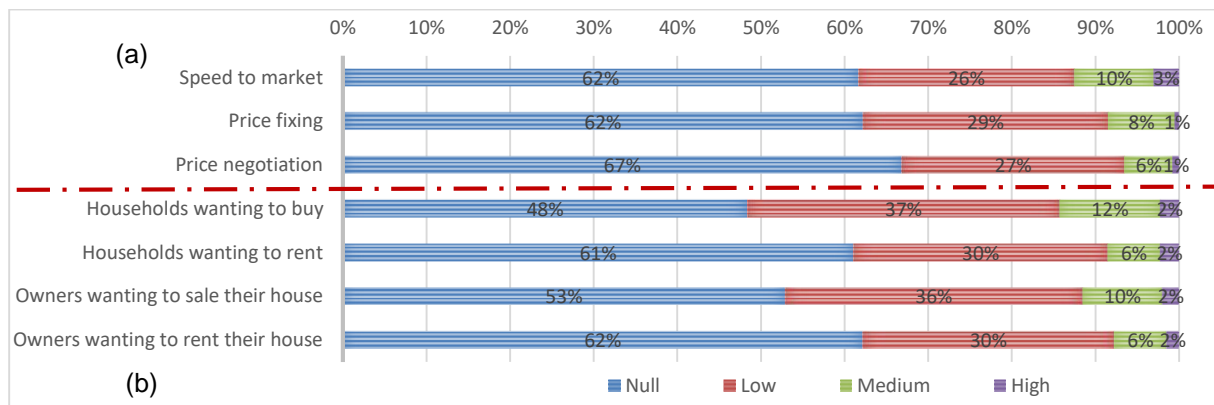


Figure 1(a). Opinion of real estate agents on the impact of EPC rankings over residential marketing;
(b). Importance that consumers and owners give to EPC rankings.

The main aim of the Energy Performance Directive is to break down the energy performance asymmetry in order to foster informed decisions. That implies that buyers and tenants must be informed before their decisions are already done. For that reason, the Directive requires that EPC information is included from the very beginning of the advertising. In Spain the RD 235/2013 that transposes the Directive is in the same line, as a matter of fact, the disciplinary regime considers the absence of EPC information in the advertisement as a major offence. As a matter of fact, the autonomic administrations in Spain have the duty to perform inspections in order to guaranty advertisement compliance. Nevertheless, empirical evidence suggests that, in general, EPC information is not included in housing advertisement. Marmolejo [11] reports that only 13% of listed properties complies with this obligation. The opinion of realtors is in the same line, according to figure 2 only 28% of them say that EPC rankings are included in the advertisement, and 15% more say that consumers are informed on the energy performance when they ask for more information or visit the property. Interestingly, most of the surveyed experts (58%) opine that consumers are informed when the buying or leasing decision has already done, that is when they sign the leasing/selling contract (32%) or even after signing the contract. This finding confirms that, as the general perception of Spaniards suggest, energy performance certificates are seen a mere requisite to formalise a property transaction. Also, this finding is coherent with the scarce importance that consumers give to energy performance when buying or leasing a house.

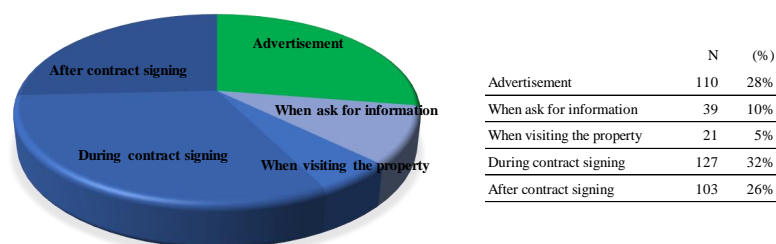


Figure 2. Moment when housing users are informed on the energy performance.

The RD235/2013 was overnighted implemented, and in the practice, no informative campaign accompanied the generalisation of the EPC scheme in Spain. For that reason, we asked realtors to state their opinion regarding the positive impacts that an informative campaign could have over the promotion of efficient homes. Such campaign should be addressed to explain the benefits of energy performance on household budgets and environment preservation, also should explain what are the EPC labels and the meaning of the ranking. Figure 3 (a) details the outcomes, realtors think, in this

order, that such campaign would: 1) improve the advice they can give to consumers regarding the energy aspects of properties, 2) transform the EPC ranking into a marketing argument, 3) raise the importance that consumers pay to EPC rankings. Nonetheless, realtors think that this communication policy could have little impact in the marketing process, regarding price determination, time to market and price negotiation. In general, 56% of the respondents think that this policy could have a low or null impact on the studied dimensions.

Finally, real estate agents were asked to declare the impact that some companion policies could have on the promotion of efficient homes. The resulting opinions (in figure 3(b)) depict a clearly divergent impact. In general, economic-related policies are seen as clearly potential drivers for the diffusion of efficient buildings. In this dimension public allowances such as tax reductions in VAT (transaction) and property are seen as the policies with larger potential to foster efficient homes, in a second place appear the subsidies to buy or lease and green mortgages which interest rate is inversely correlated with the energy performance of properties. On the contrary, the proposed policies that does not have a direct economic repercussion are seen as less effective. In this latter group the potential policies are related with information campaigns and the incorporation of thermal comfort information and passive elements in the EPC label.

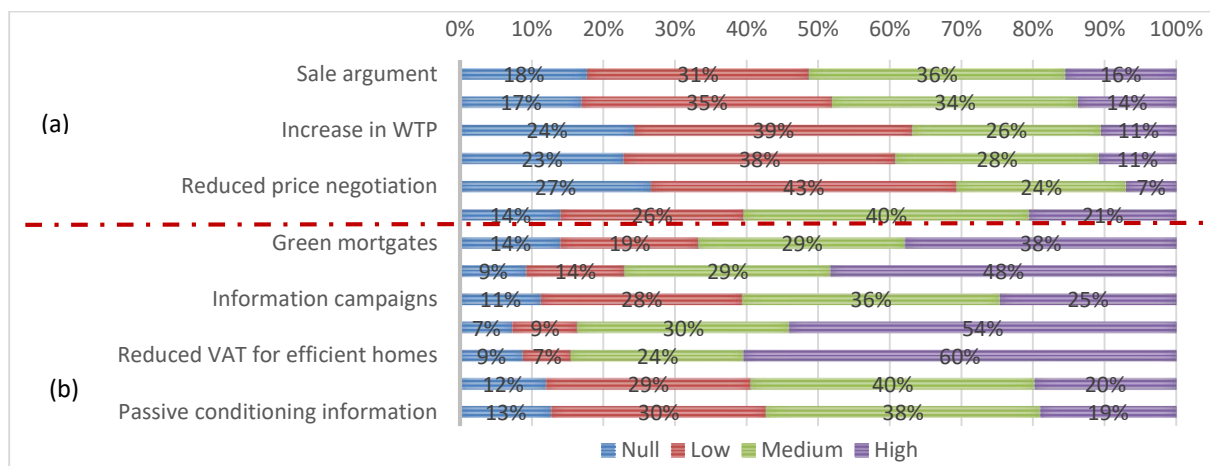


Figure 3(a). Impacts of a possible information campaign regarding the EPC schema on the residential marketing; **(b).** Impact of companion policies aimed to foster efficient homes.

5. Conclusions

Extensive, but conflictive, evidence on the impact of EPC rankings on housing prices does exist across Europe. While hedonic-based studies, in general, do give support to the positive correlation between energy efficiency and housing prices, a minor number of studies have found that such impact is small or even absent in specific submarkets. Furthermore, it also has been found that EPC rankings may be proxying for other indicators of housing quality, appearing as correlated with prices when such other quality indicators are omitted in the functional specifications. On the other hand, a more limited number of studies based on opinion-based research have found that energy efficiency is not an important driver in the marketing of homes, playing a small or negligible role in consumers' preferences and price formation.

Despite the fact that empirical evidence in Spain is scarcer, the few studies carried out on the basis of statistical models and opinion-based research are broadly in line of the aforementioned conclusions. Marmolejo and Chen [6] argue that in poor-quality apartments energy efficiency, in absence of amenities (e.g. heating, lift or swimming pool), EPC rankings seem to be misunderstood as general quality indicators. Concluding, on the other hand, that in general the EPC price semi-elasticity is one

of the smallest in Europe. Both conclusions are compatible with the findings of Pascuas *et al.* [16] and Santos *et al.* [17] that, departing from a small survey applied to realtors respectively conclude that, in Spain, only 15% of realtors do think that EPC rankings impact on property prices; and that in this country EPCs are perceived as “reliable but useless” tool in the promotion of efficient buildings. This paper seeks to expand the evidence in Spain using an opinion-based approach. In doing so, an online survey has been submitted to qualified real estate agents throughout professional associations.

Results suggest that in general realtors think that EPC rankings have a very small impact on the marketing process of homes, since its influence on price determination, speed to market and price negotiation is negligible. In general, realtors think that both supply and demand do not place energy efficiency in a relevant role when selling/buying or leasing a home. Although they perceive that owners and potential owner do give more importance to this attribute than tenants and owners wanting to lease their properties. This trend has already been reported in hedonic based studies both for the EPC scheme and other certification schemes even in the commercial market (*e.g.* offices). In any case, this finding is conflictive in a policy scenario such as the Spanish where administrations with jurisdiction in housing policy try to foster the lease market as an alternative to the property tenure. It is highly possible that the scarce importance that consumers and suppliers seem to place on energy efficiency is in part consequence of an overnight implementation of the EPC scheme in Spain and a general lack of knowledge on the scheme and the economic and environmental implications of energy efficiency. In order to learn whether realtors are in such situation we asked them, in an indirect way, their knowledge on the EPC scheme. In general, realtors fail to signal the actual role of EPC rankings as a measure of energy efficiency, since they primarily support the idea it is a thermal comfort indicator and a general quality synthetic indicator. Such evidence is compatible with the aforementioned thesis of Marmolejo and Chen [5-6]. This finding stresses the need of an informative campaign both addressed to real estate professionals and the general population. Nowadays, the Institute for the Energy Diversification (IDEA in Spanish) has some informative capsules and self-administered training courses regarding energy efficiency, but our results suggest they are not effective. Interestingly, realtors do sufficiently succeed in signalling the architectonic attributes that are taken into consideration in the determination of EPC rankings. Nevertheless, such knowledge seems to come from intuition since they produce inaccurate responses when asked for very specific attributes such as lighting, that according to the Spanish legislation, is not included in the EPC ranking determination procedure.

Our findings also reveal that EPC labels are not acting as an informative tool in the choosing process. Most of the realtors say that households are informed on the energy efficiency of bought or leased homes after they have already done their decisions, that's in the contract signing or even after having signed the contract. This finding is compatible with previous evidence and highlight the necessity to supervise in a larger extent the obligation to get an EPC and include the ranking since the advertisement of properties. By the time being, the EPC scheme in Spain is far from fostering the information symmetry pursued by the EPBD.

Finally, realtors support the idea that economic related policies could have an important effect on the promotion of efficient homes. According to their opinion, tax rebates related both with the acquisition and tenure of properties would have the largest impact. This finding is important for public policy, since in 2016 National Budget there was a frustrated initiative addressed to introduce a reduction on property in the case of more efficient buildings. Conversely, realtors are sceptical on policies of pure informative nature, both in terms of information campaigns or on the redesign of labels in order to include comfort or passive elements present in homes. According to their opinion, such information based campaigns would only impact on their capacity to give an improved advice on energy efficiency and to transform this attribute into a marketing argument.

Acknowledgements

This work is funded by EnerValor project grant BIA 2015-63606-R (MINECO/FEDER); all authors are part of the research team and have contributed in the design, dissemination of the survey, data gathering, analysis and writing of this piece. The authors do express their gratitude to Carlos Pérez, Rolando Biere and Joyce de Botton for the support received. Also, to the Spanish International Realty Alliance (SIRA) for helping to disseminate the survey among its associates.

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